

REMARKS

Claims 1-36 have not been amended and remain pending in the present application. No new claims have been added and no claims have been cancelled. The Examiner is respectfully requested to reconsider and withdraw the rejections in view of the remarks contained herein.

SPECIFICATION

Applicants have amended the specification to replace the title from the WIPO translation of the published PCT application with the title as originally filed with the application.

REJECTION UNDER 35 U.S.C. § 102

Claims 1-36 stand rejected under 35 U.S.C. § 102(e) as being anticipated by Bendinelli, et al. (U.S. Pat. No. 6,631,416) (hereinafter referred to as "Bendinelli"). This rejection is respectfully traversed.

Applicant maintains that current independent Claims 1, 2, 29, 30, 32, 33, and 34 are distinguishable from Bendinelli. The dependent claims are also distinguishable from Bendinelli at least by virtue of their dependency on these independent claims.

Independent Claims 1, 30, and 33

The Examiner cites the recitation of Claim 33 and points out col. 13, lines 21-34, of Bendinelli (regarding the first and second paragraphs of Claim 33), col. 13, lines 45-55,

of Bendinelli (regarding the third to fifth paragraphs of Claim 33), and col. 43, line 19-41, of Bendinelli (regarding the sixth to eighth paragraphs of Claim 33).

However, col. 13, lines 45-55, of Bendinelli merely disclose that when a first gateway 150 (FIG. 1) and a second gateway 151 independently consent to the establishment of a third tunnel, one of the gateways which identifies its consent provides the names and/or addresses of the other gateways to a control system 175. Col. 13, lines 45-55, of Bendinelli do not even disclose "switching information... for switching the packet" as recited in Claim 33, let alone a core router apparatus recited in Claim 33 "that receives and transfers a packet to which switching information has been affixed for switching the packet."

The gateways 150 and 151 of Bendinelli are essentially different from routers. Moreover, even if the Examiner equates gateways with routers, col. 13, lines 45-55, of Bendinelli neither disclose nor suggest the switching information calculation device in the edge router apparatus of Claim 33 "that obtains the switching information for switching the received packet at each router apparatus positioned along a transfer path of the received packet within the network based on a destination address of the packet received from the outside of the network."

Col. 43, lines 19-41, of Bendinelli merely disclose that a gateway 1610 (FIG. 16B) routes packets from a client 1615 through a tunnel 1620 to a destination such as a network operation center 610 or other gateways.

Thus, col. 43, lines 19-41, of Bendinelli neither disclose nor suggest not only the first transmitting device in the edge router apparatus of Claim 33 "that affixes to the received packet the switching information obtained by the switching information

calculation device in a transfer path order, and transfers the received packet to which the switching information has been affixed to a transfer destination router apparatus" but also the second transmitting device in the core router apparatus of Claim 33 "that switches the received packet in the core router apparatus itself based on the switching information that has been affixed to the received packet, and transmits a packet that has had the switching information used by the core router apparatus itself deleted."

The Examiner deals with both Claims 1 and 33 on the same basis as Claim 33. However, Claims 1 and 30, respectively, include features different from those of Claim 33.

Specifically, the invention as recited in Claim 1 stores line selection information for selecting one of the communication lines that comply with dissimilar communication protocols, receives packets that comply to dissimilar communication protocols from an upstream data transfer apparatus, extracts content data included in a received packet, selects a communication line corresponding to the extracted content data based on the stored line selection information, and transfers the packet to the downstream data transfer apparatus that is connected to the selected communication line.

The invention as recited in Claim 30 stores in a routing table switching information for switching a packet at each router apparatus positioned along a transfer path of the packet in a network up to another network for each network address of the other network, searches the routing table using a destination address of the packet received from the other network, obtains the switching information for switching the received packet at each router apparatus positioned along the transfer path of the received packet within the network, affixes the obtained switching information to the received

packet in a transfer path order, and transfers the received packet to which the switching information has been affixed to a transfer destination router apparatus.

The portions of Bendinelli pointed out by the Examiner do not disclose or suggest such structures recited in Claims 1 and 30.

Independent Claims 2, 29, and 34

The Examiner cites the recitation of Claim 34 and points out col. 27, lines 45-63, of Bendinelli (regarding the first to fifth paragraphs of Claim 34), col. 28, lines 36-48, of Bendinelli (regarding the sixth paragraph of Claim 34), col. 13, line 45-55, of Bendinelli (regarding the seventh paragraph of Claim 34), and col. 43, lines 19-41, of Bendinelli (regarding the eighth and ninth paragraphs of Claim 34).

However, col. 27, lines 45-63, of Bendinelli merely disclose that: a gateway (FIG. 6A or FIG. 6B) has a routing table; the gateway has information on one or more of an IP address, a subnet mask, a partner list, a domain name server address, and an Internet access device address; and the gateway initiates an IPSec tunnel through a TCP tunnel to a tunnel interface module 612 in a network operation center 610, and establishes a connection from the gateway to a controller module 614 in the network operation center 610.

Thus, col. 27, lines 45-63, of Bendinelli neither disclose nor suggest the edge router apparatus of Claim 34 which stores switching information for switching a packet at each router apparatus positioned along a transfer path of the packet in a network up to another network for each network address of the other network.

Col. 28, lines 36-48, of Bendinelli merely disclose that a first gateway 650 opens a TCP connection to the network operation center 610; establishes a TCP tunnel; provides an internal routing table with an IP address provided by the network operation center 610; routes traffic associated with controlling the gateway through the TCP tunnel to the tunnel interface module 612; and communicates directly with the tunnel interface module 612 through the TCP tunnel.

Thus, col. 28, lines 36-48, of Bendinelli neither disclose nor suggest the switching information calculation device of Claim 34 "that uses a destination address of the packet received from the other network, searches the routing table, and obtains the switching information for switching the received packet at each router apparatus positioned along the transfer path of the received packet within the network."

Col. 13, lines 45-55, and col. 43, lines 19-41, of Bendinelli merely disclose the matters set forth with respect to independent Claims 1, 30, and 33.

Thus, col. 13, lines 45-55, and col. 43, lines 19-41, of Bendinelli neither disclose nor suggest not only a first transmitting device in the edge router apparatus of Claim 34 "that affixes to the received packet the switching information... in a transfer path order, and transfers the received packet to which the switching information has been affixed to a transfer destination router apparatus" but also the second transmitting device in the core router apparatus of Claim 34 "that switches the received packet in the core router apparatus itself based on the switching information that has been affixed to the received packet, and transmits a packet that has had the switching information used by the core router apparatus itself deleted."

The Examiner deals with Claim 29 on the same basis as Claim 34. However, the edge router apparatus of Claim 29 includes features which are slightly different from those of the edge router apparatus in the network system of Claim 34.

Specifically, the edge router apparatus of Claim 29 obtains switching information for switching the received packet at each router apparatus positioned along a transfer path of the received packet within a network based on a destination address of the packet received from the outside of the network, affixes to the received packet the obtained switching information in a transfer path order, and transmits the received packet to which the switching information has been affixed to a transfer destination router apparatus.

The portions of Bendinelli pointed out by the Examiner do not disclose or suggest such a structure of Claim 29.

The Examiner deals with Claim 2 on the same basis as Claim 34. However, the data transfer apparatus of Claim 2 includes features which are slightly different from those of the edge router apparatus of Claim 34.

Specifically, the invention as recited in Claim 2 stores destination selection information for selecting a communication line as well as line selection information for selecting one of communication lines that comply with dissimilar communication protocols, receives packets that comply to dissimilar communication protocols from an upstream data transfer apparatus, extracts destination information that represents a destination included in a received packet, selects the communication line corresponding to the extracted destination information based on the stored destination selection information, extracts content data included in the received packet when a plurality of

communication lines have been selected, selects the above-described selected communication line or the communication line corresponding to the content data extracted based on the stored line selection information, and transfers the packet to a downstream data transfer apparatus connected to the thus selected communication line.

The portions of Bendinelli pointed out by the Examiner do not disclose or suggest such a structure of Claim 2.

Independent Claim 32

The Examiner cites the recitation of Claim 36 and points out col. 58, lines 27-36, col. 57, lines 9-15, and col. 13, lines 45-55, of Bendinelli. However, the core router apparatus of Claim 32 includes features which are different from those of the core router apparatus in the network system of Claim 36.

Specifically, the core router apparatus of Claim 32 is a "core router apparatus that receives and transfers a packet to which switching information has been affixed for switching the packet," and "the core router apparatus switches the received packet by the core router apparatus itself based on the switching information affixed to the received packet, and the core router apparatus comprises a transmitting device that transmits a packet that has had the switching information used by the core router apparatus itself deleted."

Col. 58, lines 27-36, of Bendinelli merely disclose that a tunnel interface module 612 authenticates a VPN request 10760 by, for example, verifying that a virtual IP address provided in the VPN request 10760 matches a virtual IP address stored in a

database server 616 for a gateway 650, and transmits the authenticated VPN request 10760 to a controller module 614 provided in a network operation center 610.

Col. 57, lines 9-15, of Bendinelli merely disclose that a gateway 650 refers to a routing table in the gateway 650 itself to determine the public IP address for a tunnel interface module 612, and the gateway 650 uses an Internet/Intranet access device, a DHCP server, and/or a domain name server to resolve the real IP address of the tunnel interface module 612.

Col. 13, lines 45-55, of Bendinelli merely disclose the matters set forth with respect to independent Claims 1, 30, and 33.

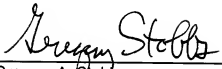
Therefore, the portions of Bendinelli pointed out by the Examiner neither disclose nor suggest the structure of Claim 32 (in particular, transmitting a packet that has had the switching information used by the core router apparatus itself deleted).

CONCLUSION

It is believed that all of the stated grounds of rejection have been properly traversed, accommodated, or rendered moot. Applicant therefore respectfully requests that the Examiner reconsider and withdraw all presently outstanding rejections. It is believed that a full and complete response has been made to the outstanding Office Action and the present application is in condition for allowance. Thus, prompt and favorable consideration of this amendment is respectfully requested. If the Examiner believes that personal communication will expedite prosecution of this application, the Examiner is invited to telephone the undersigned at (248) 641-1600.

Respectfully submitted,

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